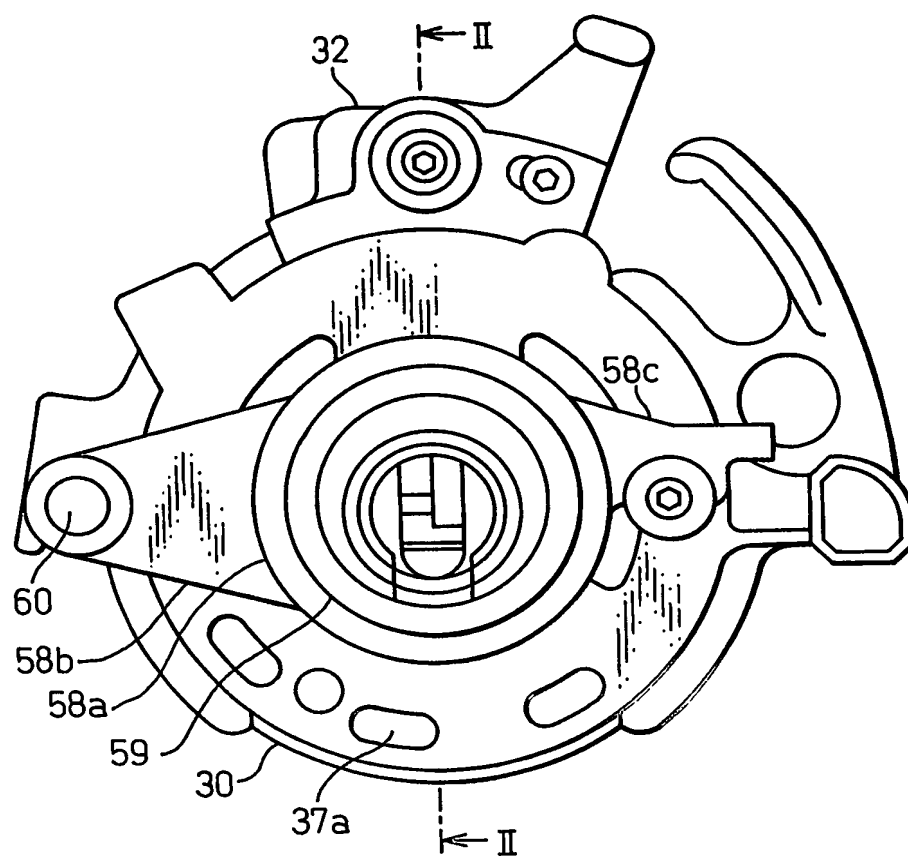


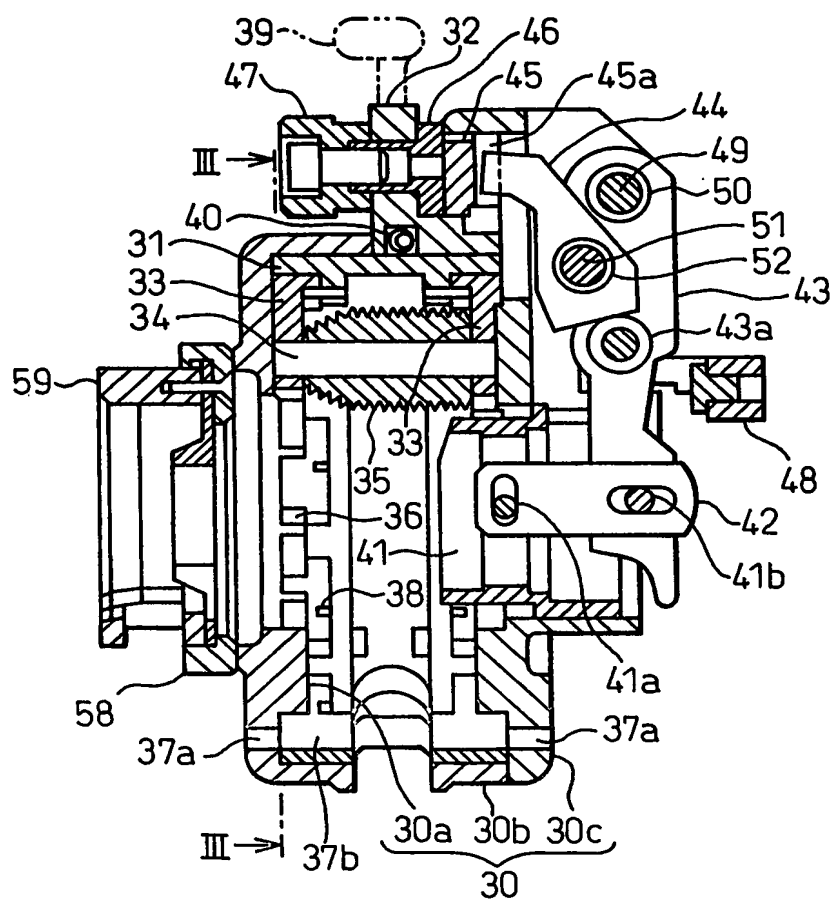
1/13

Fig.1



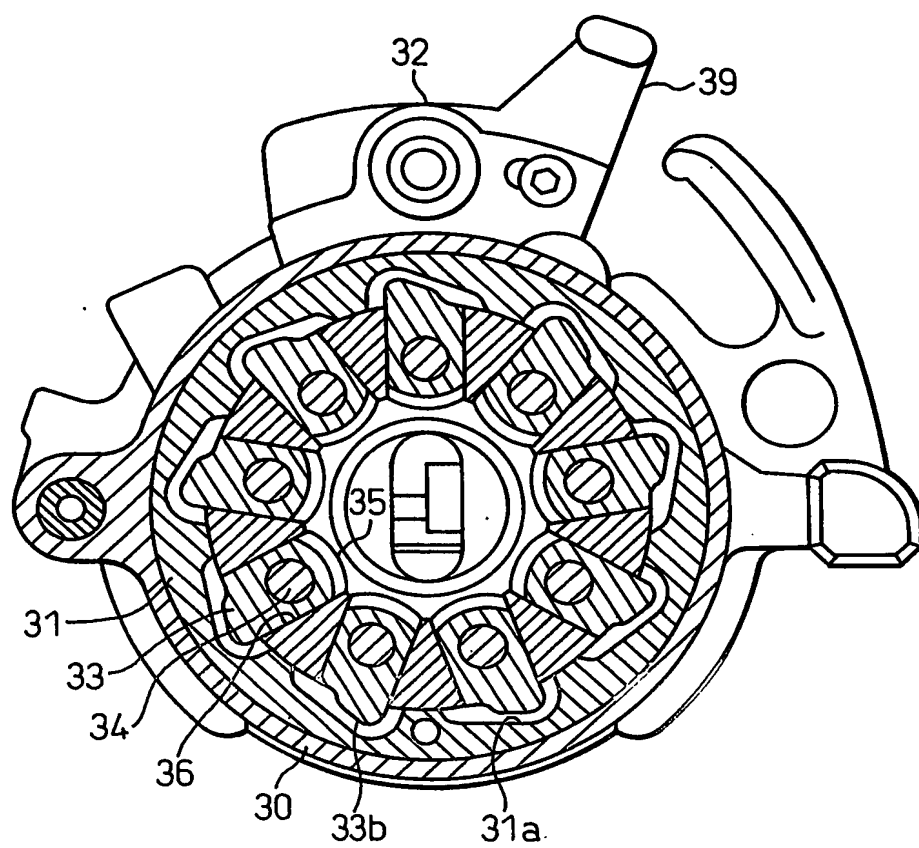
2/13

Fig. 2



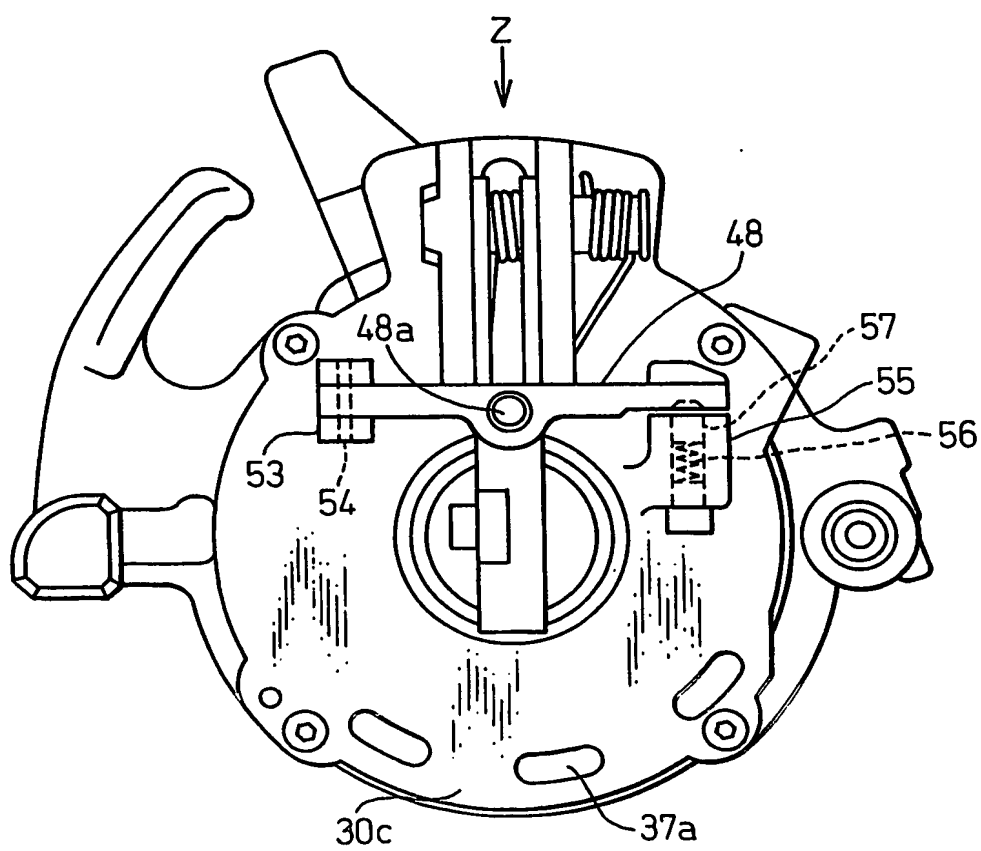
3/13

Fig.3



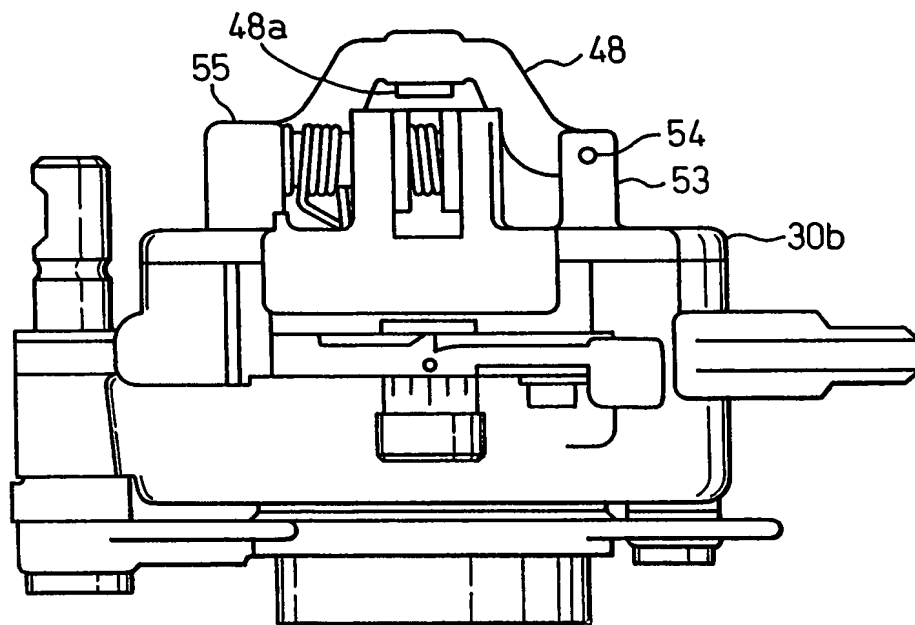
4/13

Fig.4



5/13

Fig.5





$\frac{7}{13}$ 

Fig. 7a

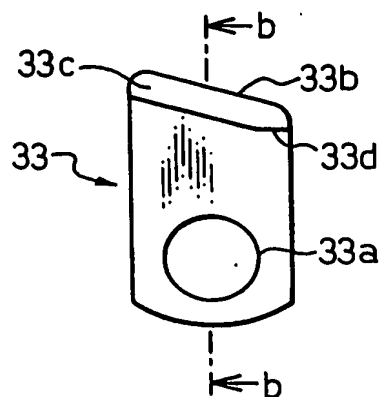


Fig. 7b

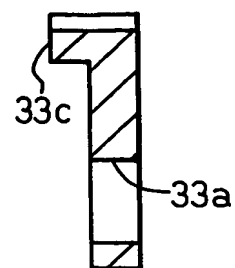


Fig. 8a

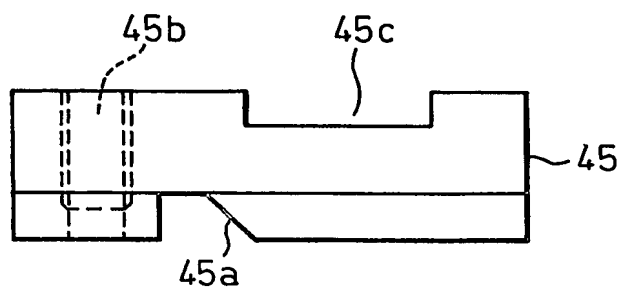
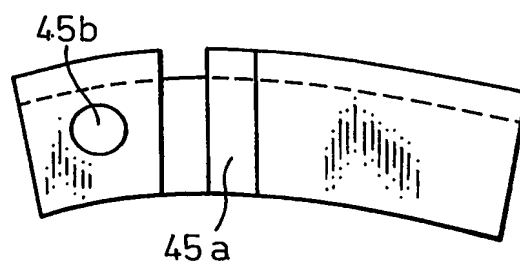


Fig. 8b



8/13

Fig.9a

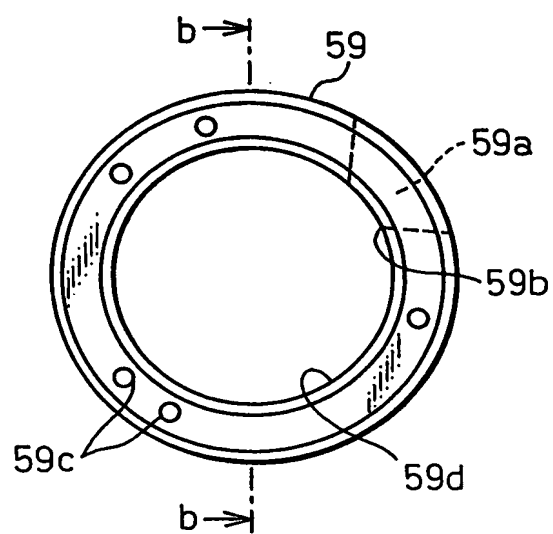
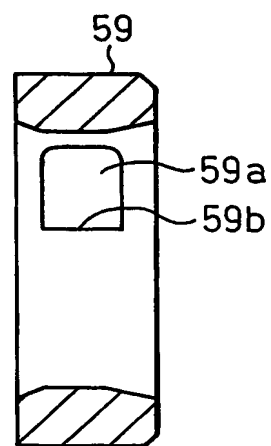


Fig.9b

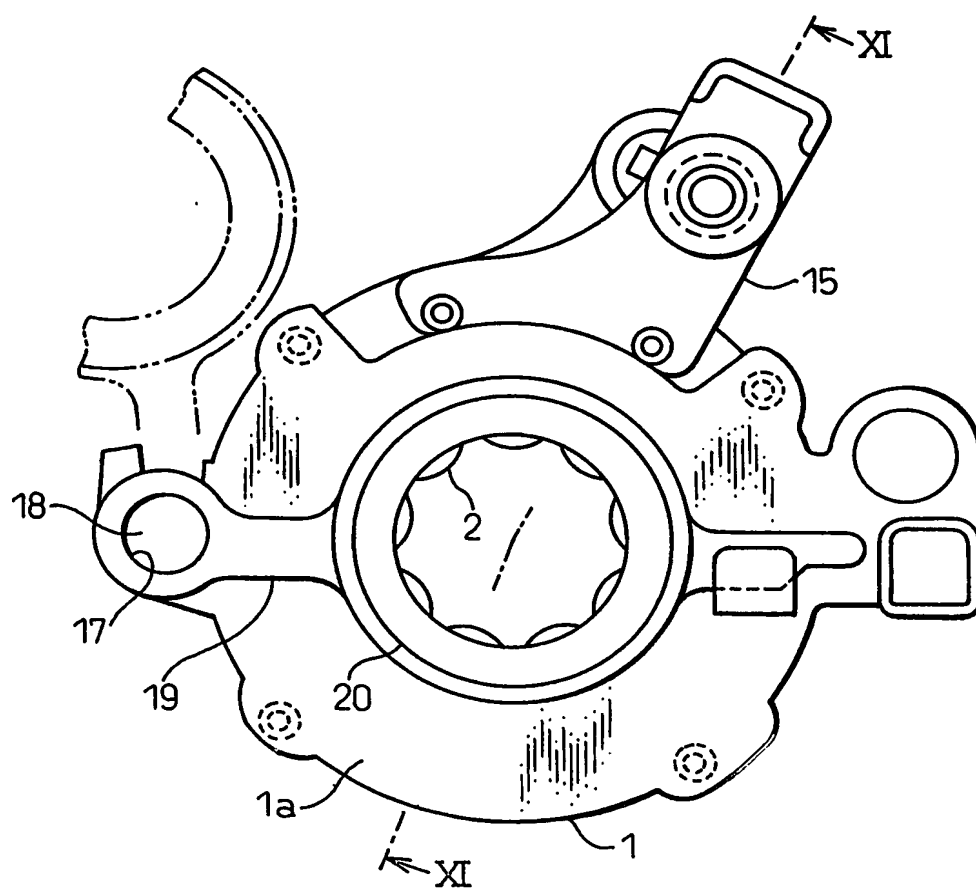




9/13

Fig.10

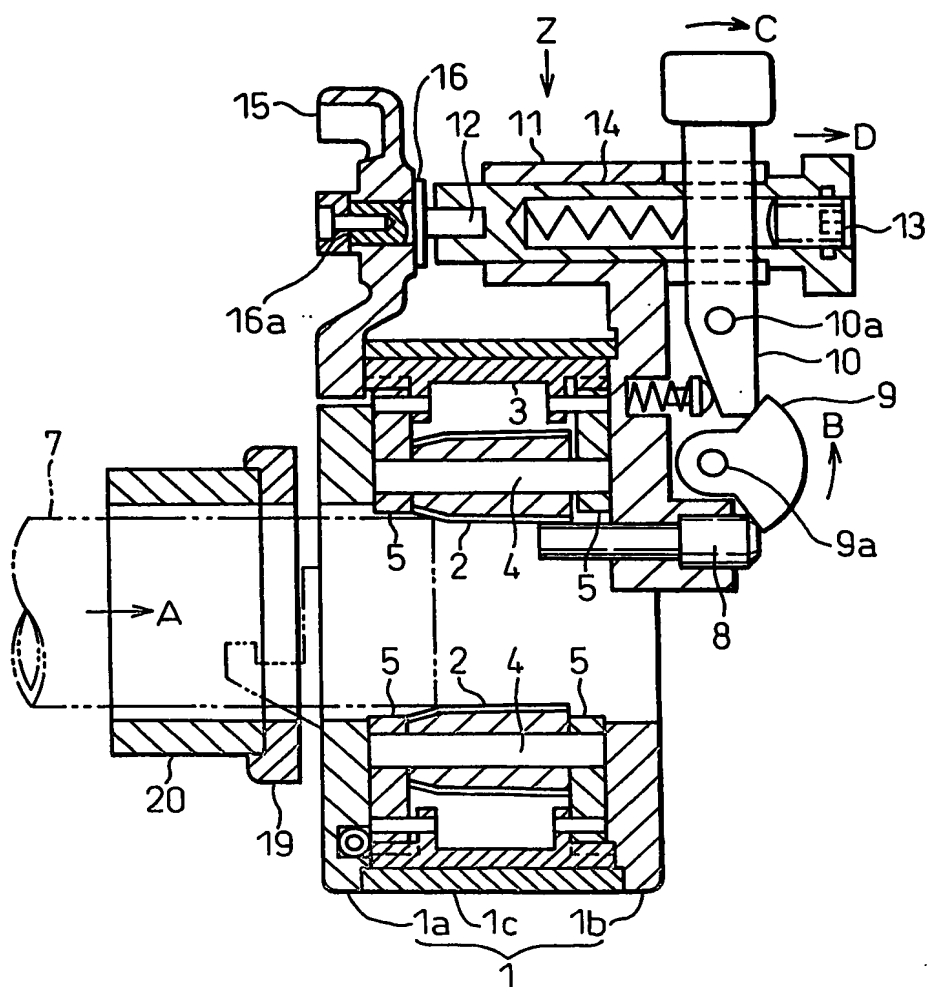
PRIOR ART



10/13

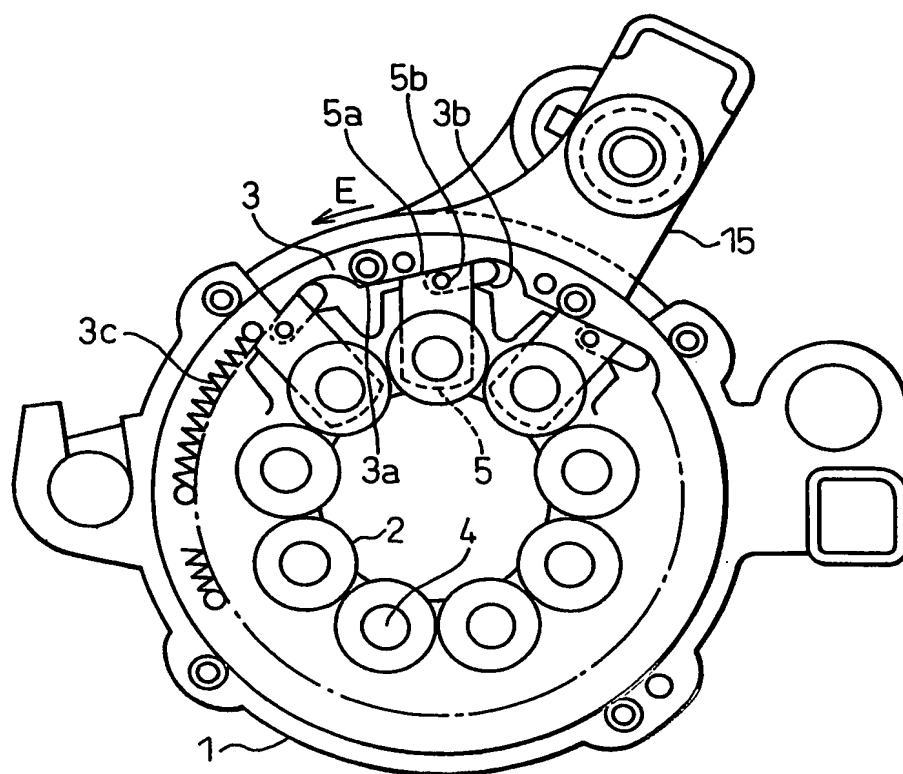
Fig.11

PRIOR ART



11/13

Fig.12  
PRIOR ART



## List of Reference Number

30...housing  
30a...front closure  
30b...intermediate part  
30c...rear closure  
31...cam ring  
31a...cam oblique surface  
32...setting block  
33...shaft bearing plate  
33a...shaft bearing hole  
33b...oblique surface of shaft bearing plate  
33c...projection  
33d...surface in parallel with width direction  
34...roller shaft  
35...thread rolling roller  
36...guide groove  
37a,37b...foreign matter discharge hole  
38,41a...pin  
39...lever  
40,50,52,56...spring  
41...abutment member  
41b...bolt  
42...link  
43...first lever  
43a...roller  
44...second lever  
44a...front end of second lever  
44b...lower surface of second lever  
45...cam member  
45a...cam oblique surface  
45b...threaded hole  
45c...groove  
46...eccentric cam  
47...thread diameter adjusting knob  
48...buffer arm  
48a...elastic member  
49,51...support shaft

53,55...boss  
54...hinge pin  
57...shutter pin  
58...scraper holder  
58a...holder part  
58b,58c...arm  
59...scraper  
59a...angle hole  
59b...cutting blade  
59c...threaded hole  
59d...inner diameter part for guiding to-be-rolled pipe  
60...shaft